

**Before the  
United States of America  
Federal Energy Regulatory Commission of America**

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<sup>1</sup> 70 Fed. Reg. 34,417 (2005) [hereinafter Notice]. The Federal Energy Regulatory Commission's (FERC) Notice of Inquiry (NOI) in this matter follows a related Notice of Public Rulemaking in Docket No. RM05-5-000 (70 Fed. Reg. 40696 (2005)), in which FERC proposed to amend its regulations to incorporate by reference standards promulgated by the North American Energy Standards Board's Wholesale Electric Quadrant dealing with Open Access Same-Time Information Systems (OASIS) business practice standards.

<sup>2</sup> *Comment of the Staff of the Bureau of Economics of the Federal Trade Commission(1)*, FERC Nos. RM95-8-000 and RM94-7-001 (Aug. 7, 1995), available at <http://www.ftc.gov/be/v950008.htm>; Letter from the FTC to Thomas E. Bliley, Chairman, Committee on Commerce, U.S. House of Representatives (Jan 14, 2000), available at <http://www.ftc.gov/be/v000002.htm> [hereinafter *Bliley Letter*].

<sup>3</sup> Substantial economies of scale and transmission siting difficulties generally preclude the organization of competing transmission networks, and there are no practicable alternatives to the grid for d

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provide a limited alternative for some customers. Improvements in DG technology may eventually make it an important substitute for grid transmission services; however, this potenti



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<sup>8</sup> Subtractions from TTC also generally include a transmission reserve margin (TRM) and often include a capacity benefit margin (CBM). Notice, 70 Fed. Reg. at 34418. “Transmission providers use TRM and CBM to account for uncertainties or contingencies that are not explicitly modeled in the calculations of existing transmission obligations.” *Id.*

<sup>9</sup> North American Electric Reliability Council, *Long-Term AFC/ATC Task Force Final Report* (revised Apr. 14, 2005), available at [ftp://www.nerc.com/pub/sys/all\\_updl/mc/ltatf/LTATF\\_Final\\_Report\\_Revised.pdf](ftp://www.nerc.com/pub/sys/all_updl/mc/ltatf/LTATF_Final_Report_Revised.pdf) [hereinafter *NERC Report*]. The “AFC” in the title of the North American Electric Reliability Council’s (NERC) report stands for “available flowgate capability,” which is “w  
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available transfer capability and to mask forms of transmission discrimination by transmission operators. As discussed in Section V, FERC also should consider the benefits and costs of developing and implementing standards for measurement of TTC, which is a key component in the calculation of ATC. TTC may be subject to significant measurement bias that will in turn resu

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<sup>10</sup> *FTC Staff Report: Competition and Consumer Protection Perspectives on Electric Power Regulatory Reform*, *supra* note 3 (compiling previous comments that the FTC staff provided to various state and federal agencies); *FTC Staff Report: Competition and Consumer Protection Perspectives on Electric Power Regulatory Reform, Focus on Retail Competition* (Sept. 2001), available at <http://www.ftc.gov/reports/elec/electricityreport.pdf>.



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<sup>14</sup> FERC issued Order Nos. 888 and 889 on April 24, 1996. Subsequent revisions and refinements to Order No. 888 can be found at <http://www.ferc.gov/legal/ferc-regs/land-docs/order888.asp>, and subsequent revisions and refinements to Order No. 889 can be found at <http://www.ferc.gov/legal/ferc-regs/land-docs/order889.asp>.



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<sup>16</sup> *Regional Transmission Organizations*, Order No. 2000 (Dec. 20, 1999), available at <http://www.ferc.gov/legal/ferc-regs/land-docs/RM99-2A.pdf#search='FERC%20Order%202000'>.

<sup>17</sup> A potential concern about any form of vertical separation (unbundling) is the loss of economies of vertical integration. Many developments within RTOs and ISOs are designed to preserve coordination between stages of production without creating opportunities and incentives for transmission discrimination. Because of this potential, the FTC has consistently urged FERC to use a cost/benefit approach to evaluate the regulatory approach it uses to eliminate transmission discrimination.

<sup>18</sup> *Comment of the Staff of the Bureau of Economics of the Federal Trade Commission*, FERC No. RM99-2-000 (Aug. 16, 1999), available at <http://www.ftc.gov/>

Although the RTO formation process has gone forward in many areas of the country,<sup>19</sup> RTOs have not been formed everywhere.<sup>20</sup> Thus, Open Access Same-Time Information Systems (OASIS) postings are still a significant component of open-access, nondiscriminatory service for transmission customers in some areas.

### **III. Improving ATC Calculations Can Increase the Competitiveness of Wholesale Electricity Markets**

For four reasons, increases in the transparency and uniformity of ATC calculations may help wholesale markets become more competitive. First, behavioral rules, while not perfect, are likely to be the best available short-term deterrent to profitable transmission discrimination in those areas without an RTO. Under these circumstances, there likely will be incremental benefits from improved ATC calculations before these benefits are supplanted by the more substantial benefits flowing from an operating RTO, ISO, or independent Transco.

Second, ATC improvements may assist NERC's efforts to minimize transmission disruptions associated with Transmission Line Relief (TLR) orders or even blackouts.<sup>21</sup> If ATC is understated, NERC may invoke a TLR order when it is not necessary to do so. Improving ATC calculations and coordination between areas may reduce this potential problem.

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<sup>19</sup> Over two-thirds of U.S. economic output is produced in areas in which transmission is operated by an RTO or an Independent System Operator (ISO). *Restructuring Today* 1 (May 13, 2005).

<sup>20</sup> A map of existing and proposed RTOs appears at <http://www.ferc.gov/industries/electric/indus-act/rto/rto-map.asp>. The Southeast and Northwest areas of the United States are the primary regions that lack RTOs.

<sup>21</sup> See *NERC Report*, *supra* note 8, at 1.

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<sup>22</sup> The Department of Energy designated NERC as the electricity sector coordinator for critical infrastructure protection, and NERC organized a Critica

it may be difficult to determine whether, for example, non-firm transmission services will suffice to accommodate a wholesale transaction across these areas.<sup>23</sup>

Transmission operators in non-RTO areas reportedly are inconsistent in how they calculate ATC and in the criteria they use to activate TLR orders. As a result of this uncertainty about the calculations and this inconsistency in activating TLR orders, some wholesale transactions between areas may not occur, even though they would be efficient and likely would occur if ATC information were better. Prices are likely to be higher if customers are uncertain about being able to access lower-priced electric power from other areas.

The NERC task force report found between 50 and 60 different methods to calculate ATC throughout the industry, many of which are not comparable. Methods differ across and even within NERC regions.<sup>24</sup>

In addition to finding inconsistencies among firms, the task force determined that sometimes a firm makes assumptions in performing its ATC calculations that are inconsistent with the assumptions that its own transmission planning and operations departments use.<sup>25</sup> For example, a transmission operator may use assumptions that result in reporting little ATC while it uses different assumptions to evaluate the feasibility of importing electric power generated in other areas to maintain reliability and resource adequacy.<sup>26</sup> The former assumptions would discourage low-cost generators in other areas from attempting to secure sales to customers in the transmission operator's franchised

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<sup>23</sup> See *NERC Report*, *supra* note 8, at 2.

<sup>24</sup> *Id.* at 2-3.

<sup>25</sup> *Id.* at 3.

<sup>26</sup> *Id.* at app. E.

territory, while the latter would relieve commercial or regulatory pressure for new transmission investment in the franchised territory. The transmission utility should not be allowed to claim that there is little ATC for one regulatory purpose while also claiming that there is abundant ATC for another regulatory purpose.

Further, even when the ATC assumptions are consistent, this consistency may not be well documented or transparent to other market participants.<sup>27</sup> A lack of transparency can lead independent generators to perceive a greater risk of transmission interruptions than actually exist and also could insulate the transmission operator's own generators from competition from lower-priced generators located in other areas.

#### **V. FERC Also May Wish to Consider Standards for TTC Measurement**

If FERC seeks to discourage transmission discrimination by improving ATC calculations, it may wish to assure that TTC, the starting point for many ATC calculations, is measured accurately and consistently. Many ATC calculations involve the subtraction of transmission obligations from TTC. Reportedly, however, some transmission operators determine TTC on the basis of assumptions about ambient conditions that are likely to understa. TheTATC

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<sup>27</sup> *Id.* at 3.

<sup>28</sup> Thermal limitations are the most common constraints that limit the capability of a transmission line, cable, or transformer to carry power. The transmission line resists the flow of electrons through it, causing the production of heat. The actual temperatures occurring in the transmission line equipment depend on the current (*i.e.*, the rate of flow of the electrons) as well as on ambient weather conditions such as temperature, wind speed, and wind direction because the weather affects the dissipation of the heat into the air. For ease of measurement, however, the thermal ratings for transmission lines are usually expressed in terms of current flows rather than actual temperatures.

Thermal limits are imposed because overheating leads to two possible problems: (1) the transmission line loses strength because of overheating, which can reduce the expected life of the line; and (2) the transmission line expands and sags in the center of each span between the supporting towers. If the temperature is repeatedly too high, an overhead line will permanently stretch and may end up with less clearance from the ground than is required for safety reasons. Because this overheating is a gradual

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process, higher current flows can be allowed for limited time periods. A "normal" thermal rating for a line is the current flow level that it can support indefinitely. "Emergency ratings are levels the line can support for specific periods, for example, several hours." Department of Energy, *Upgrading Transmission Capacity for Wholesale Electric Power Trade* (2002), available at [http://www.eia.doe.gov/cneaf/pubs\\_html/feat\\_trans\\_capacity/w\\_sale.html](http://www.eia.doe.gov/cneaf/pubs_html/feat_trans_capacity/w_sale.html). See also Steven Stoft, *Power System Economics: Designing Markets for Electricity* ch. 5-2 (2002).

<sup>29</sup> At the technical conference that FERC held on December 7, 2004, concerning the transmission prong of the market power screens for market-based rate applicants, John Stout, an experienced transmission planner and operator, testified about the potential underestimation of ATC as a result of transmission operators' use of antiquated transmission technology that assumes unfavorable ambient conditions (rather than actually measuring such conditions). See *Market-Based Rates for Public Utilities: Hearing on No. RM-04-7-000 Before the Federal Energy Regulatory Commission*, 100 FERC ¶ 61,018 (July 22, 2004) (testimony of John Stout, Independent Power Operator, Electric Power Supply Association), available at <http://www.ferc.gov/EventCalendar/Files/>

incentive of transmission owners to engage in discrimination. Transmission reliability and security concerns also may warrant updates to these regulations. The FTC urges FERC not to relax its efforts to implement RTOs and Transcos while it is improving ATC calculations. If FERC determines that there is merit to improving ATC calculations, it also should consider improvements to TTC calculations, on which ATC calculations are based.